Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1-7 (cancelled)

8 (Currently amended). An isolated DNA molecule coding for a polypeptide tolerogen which suppresses the autoimmune response of an individual to acetylcholine receptor, comprising residues 61-76 of SEQ ID NO:2 and/or residues 184-210 of SEQ ID NO:2, wherein said polypeptide comprises a human acetylcholine receptor α-subunit portion and is selected from the group consisting of:

(i) a polypeptide consisting of the amino acid sequence of SEQ ID NO:6;

(ii) a polypeptide consisting of the amino acid sequence of SEQ ID NO:8;

(iii) a polypeptide consisting of amino acid residues 1-121 of SEQ ID NO:2;

(iv) a polypeptide consisting of amino acid residues 1-146 of SEQ ID NO:6;

(v) a polypeptide consisting of amino acid residues 122-210 of SEQ ID NO:2;

(vi) a ~~polypeptide with at least 95% sequence identity to a polypeptide of (i) to (v) or the~~ polypeptide Hα1-210 of SEQ ID NO:2 ~~and~~ which suppresses experimental myasthenia gravis in animal models; and

(vii) ~~a fragment of a polypeptide as in (i), (ii), (iv), (v), or (vi), which fragment suppresses experimental myasthenia gravis in animal models; and~~

~~(viii)~~ a polypeptide~~, or a fragment~~ as defined in (i)-~~(vii)~~ (vi), or the polypeptide Hα1-210 of SEQ ID NO:2, fused to an additional polypeptide at its N- and/or C-termini, wherein the human acetylcholine receptor α-subunit portion of said fused polypeptide does not assume the native conformation of the α subunit of the human acetylcholine receptor.

9(Currently amended). An isolated DNA molecule according to claim 8, which is selected from the group consisting of:

(i) a DNA molecule ~~comprising~~ consisting of the nucleotide sequence of SEQ ID NO:5;

(ii) a DNA molecule ~~comprising~~ consisting of the nucleotide sequence of SEQ ID NO:7;

(iii) a DNA molecule ~~comprising~~ consisting of the nucleotide sequence of nucleotides 1 to 363 of SEQ ID NO:1;

(v) a DNA molecule ~~comprising~~ consisting of the nucleotide sequence of nucleotides 364 to 630 of SEQ ID NO:1;

(vi) a DNA molecule which is degenerate, as a result of the genetic code, to any DNA sequence of (i) to (v) and which codes for a polypeptide coded for by any one of the DNA sequences of (i) to (v); and

(vii) ~~a fragment of a DNA molecule as in (i) (vi), which fragment codes for a polypeptide that suppresses experimental myasthenia gravis in animal models;~~

~~and~~

~~(viii)~~ a DNA molecule ~~comprising~~ consisting of a nucleic acid sequence as defined in (i) ~~(vii)~~ (vi) or the DNA sequence, SEQ ID NO:1, coding for Hα1-210, fused to additional coding DNA sequences at its 3' and/or 5' end to encode a fusion polypeptide in which the encoded human acetylcholine receptor α-subunit portion does not assume the native conformation of the human acetylcholine receptor α-subunit.

10(Withdrawn). An isolated DNA molecule according to claim 9, which comprises the nucleotide sequence of SEQ ID NO:5.

11(Withdrawn). An isolated DNA molecule according to claim 9, which comprises the nucleotide sequence of SEQ ID NO:7.

12(Previously presented). An isolated DNA molecule according to claim 9, which comprises the nucleotide sequence corresponding to nucleotides 1 to 363 of SEQ ID NO:1.

13(Withdrawn). An isolated DNA molecule according to claim 9, which comprises the nucleotide sequence of nucleotides 1 to 438 of SEQ ID NO:5.

14(Previously presented). An isolated DNA molecule according to claim 9, which comprises the nucleotide sequence of nucleotides 364 to 630 of SEQ ID NO:1.

15(Currently amended). An isolated DNA molecule according to claim 9, wherein said additional coding sequence in ~~(xi)~~ (vii) codes for glutathione S-transferase (GST) and is fused at the 5' end of said nucleic acid sequence.

16(Previously presented). A replicable expression vector comprising a DNA molecule according to claim 8.

17(Previously presented). An isolated prokaryotic or isolated eukaryotic host cell transformed with the replicable expression vector of claim 16.

18(Previously presented). A process for preparing a polypeptide which suppresses the autoimmune response of an individual to acetylcholine receptor, comprising:

(i) culturing a host cell of claim 17 under conditions promoting expression; and

(ii) isolating the expressed polypeptide.

19(Original). A process according to claim 18, wherein the expressed polypeptide is a fused polypeptide.

Claims 20-22 (Cancelled)

23(Withdrawn). An isolated DNA according to claim 8, wherein said polypeptide consists of the amino acid sequence of SEQ ID NO:6.

24(Withdrawn). An isolated DNA according to claim 8 wherein said polypeptide consists of the amino acid sequence of SEQ ID NO:8.

25(Previously presented). An isolated DNA according to claim 8, wherein said polypeptide consists of amino acid residues 1-121 of SEQ ID NO:2.

26(Previously presented). An isolated DNA according to claim 8, wherein said polypeptide consists of amino acid residues 1-146 of SEQ ID NO:6.

27(Previously presented). An isolated DNA according to claim 8, wherein said polypeptide consists of amino acid residues 122-210 of SEQ ID NO:2.

28(Previously presented). An isolated DNA according to claim 8, wherein said polypeptide is (vi).

29(Withdrawn). An isolated DNA according to claim 8, wherein said polypeptide is (vii).

30(Previously presented). An isolated DNA according to claim 8, wherein said polypeptide is (viii).

31(Previously presented). An isolated DNA according to claim 30, wherein said additional polypeptide is glutathione S-transferase.